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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,208	03/31/2004	Elizabeth Ann Black-Ziegelbein	AUS920040036US1 (4038)	9525
45557	7590	01/14/2008		
IBM CORPORATION (JSS) C/O SCHUBERT OSTERRIEDER & NICKELSON PLLC 6013 CANNON MOUNTAIN DRIVE, S14 AUSTIN, TX 78749			EXAMINER WU, JUNCHUN	
			ART UNIT 2191	PAPER NUMBER
			MAIL DATE 01/14/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/815,208

Applicant(s)

BLACK-ZIEGELBEIN ET AL.

Examiner

Junchun Wu

Art Unit

2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-16, 18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-16, 18, and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This office action is in response to the amendment filed on Oct. 18, 2007.
2. Claims 1-12, 14-16, 18 and 21-24 are pending.
3. Claims 1, 9, 15, 16 and 18 have been amended.
4. Claims 13, 17, 19 and 20 have been cancelled.
5. Claims 21-24 are new.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 6, 7, 9 and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Jorapur (U.S. Pub. No. 20030204784 A1).

3. Per claim 1 (Currently amended)

Jorapur discloses

- A method to test a code segment of a source file, comprising: machine-rendering a source code skeleton in response to a selection of the code segment ([Abstract] "*A system and method provide testing of software in different configurations automatically. Templates may be provided for developers to create an application or for generating tests.*").

- within the source file, wherein machine-rendering comprises choosing additional code from the source file, outside of the selection, to include in the source code skeleton to supplement the code segment for compilation ([0039] “*The source code accessed 401 may describe the application to be tested. Some of the source code may have been automatically generated. Parts of the source code may be derived from templates. Depending on the type of testing to be performed or the type of results sought, testing may determine whether to add test code to the source code 402. Test code may be inserted into the source code 403, for example into code for one or more modules, to provide additional functionality for testing.” & “...The source code, which may include test code, may be compiled and/or packaged to produce an executable application.”).*
- incorporating the code segment into the source code skeleton to generate a temporary source file ([0026] “*one or more standard templates may be provided and an application may be generated by generator.*”).
- inserting a monitoring statement into the temporary source file, the monitoring statement to provide runtime data associated with the code segment ([0026] “*testing may involve inserting test code into the software to be tested...*” & [0034] “*the generator may be configured to access a library of deployment descriptors to generate deployment descriptors that will configure run time environments to execute tests.*”).
- compiling the temporary source file into a compiled program to output a result based upon the monitoring statement when the temporary source file is executed ([0031] “*the test code may provide reports on processes that are not normally visible to users during*

*execution” & [0040] “after different test was inserted before compilation and/or packaging”).*

4. Per claim 2 (Original)

Jorapur discloses

the rejection of claim 1 is incorporated and Jorapur further discloses

- executing the compiled program ([0042] *“the test may be executed to assess the operation and functions of the application to be tested as deployed”*).
- outputting the result in response to the executing, wherein the result is based upon the monitoring statement ([0042] *“Data indicating the results of execution may be collected during execution of a test.”*).

5. Per claim 6 (Original)

Jorapur discloses

the rejection of claim 1 is incorporated and Jorapur further discloses

- machine-rendering comprises copying external code referenced by the code segment into the temporary source file ([0034] *“the generator may be configured to access a library of deployment descriptors to generate deployment descriptors that will configure run time environments to execute tests.” & the external reference code i.e. Dynamic link library (DLL)*).

6. Per claim 7 (Original)

Jorapur discloses

the rejection of claim 1 is incorporated and Jorapur further discloses

- inserting the monitoring statement comprises prompting a programmer to select a variable to associate with the result and inserting an assignment statement into the temporary source file to capture the runtime data from the selected variable ([0026] *“Through parameters, a user may indicate a standard template or may include more complex data indicating, for example, modules and/or functions to be included, communication protocols to be used, resources available, operating environment, etc.”*).

7. Per claim 9 (Currently amended)

Jorapur discloses

- A system to test a code segment of a source file, comprising: a file creator to create a temporary source file in response to a selection of the code segment ([Abstract] *“A system and method provide testing of software in different configurations automatically. Templates may be provided for developers to create an application or for generating tests.”*).
- the file creator to machine-render the source code skeleton with additional code from the source file, outside of the selection, the file creator to choose the additional code from the source file based upon the code segment to supplement the code segment for compilation ([0039] *“The source code accessed 401 may describe the application to be tested. Some of the source code may have been automatically generated. Parts of the source code may be derived from templates. Depending on the type of testing to be performed or the type*

*of results sought, testing may determine whether to add test code to the source code 402.*

*Test code may be inserted into the source code 403, for example into code for one or more modules, to provide additional functionality for testing.” & “...The source code, which may include test code, may be compiled and/or packaged to produce an executable application.”).*

- a code gatherer to copy by the code segment into the temporary source file ([0034] “*the generator may be configured to access a library of deployment descriptors to generate deployment descriptors that will configure run time environments to execute tests.*” & the external reference code i.e. Dynamic link library (DLL)).
- a code generator to insert a monitoring statement, the monitoring statement to provide runtime data associated with the code segment ([0026] “*testing may involve inserting test code into the software to be tested...*” & [0034] “*the generator may be configured to access a library of deployment descriptors to generate deployment descriptors that will configure run time environments to execute tests.*”).
- an adaptive compiler to compile the temporary source file into a compiled program to generate a result based upon the monitoring statement ([0031] “*the test code may provide reports on processes that are not normally visible to users during execution*” & [0040] “*after different test was inserted before compilation and/or packaging*”).
- a processor to execute the compiled program ([0042] “*the test may be executed to assess the operation and functions of the application to be tested as deployed*”).
- an output device to communicate the result ([0042] “*Data indicating the results of execution may be collected during execution of a test.*”).

8. Per claim 21 (New) and 23 (New)

the rejection of claims 1 and 9 are incorporated and Jorapur further discloses

- wherein machine-rendering further comprises modifying the additional code from the source file and inserting modified additional code into the source code skeleton ([0040] *“In one embodiment, a test generator may generate parts to add or modify existing modules or applications to be tested and instead of replacing modules or applications these may be altered according to the testing parameters generated by the automated test generator.”*).

9. Per claim 22 (New) and 24 (New)

the rejection of claims 1 and 9 are incorporated and Jorapur further discloses

- wherein choosing additional code from the source file outside of the selection comprises copying the additional code from the source file and pasting the additional code into the source code skeleton, the additional code comprising at least a variable definition, a variable assignment, a library reference, and an entry point ([0037] *“In one embodiment, the test generator 301 may receive as input one or more configuration files 303 in addition or instead of an application and may generate tests based on the configuration 303. For example, the tests may involve varying the configuration parameters within one or more configuration files. & ([0034] “the generator may be configured to access a library of deployment descriptors to generate deployment descriptors that will configure run time environments to execute tests.”*).



***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorapur, in view of Friedman et al. (US Patent No. 7,171,588 B2, hereinafter "Friedman").

12. Per claim 8 (Original)

the rejection of claim 1 is incorporated and Jorapur do not disclose

- the monitoring statement comprises inserting a time stamp statement into the temporary source file to capture a time stamp.

But Friedman discloses

- the monitoring statement comprises inserting a time stamp statement into the temporary source file to capture a time stamp (col.7 lines 8-10 "*The transaction numbers, input and output objects, elapsed time and success or failure can be recorded by the probes*").
- Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify teaching of Jorapur with the teachings of Friedman to include the monitoring statement comprises inserting a time stamp statement into the temporary source file to capture a time stamp in order to calculate out the time for the EJB test engine to determine the actual time spent (Friedman, col.8 lines 15-17).

13. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorapur, in view of Gallardo ("Getting Started with the Eclipse Platform" from IBM on Nov. 1 2002).

14. Per claim 10 (Original)

the rejection of claim 9 is incorporated and Jorapur do not disclose

- the file creator comprises an extensible integrated development environment having a language development tool plug-in.

But Gallardo discloses

- the file creator comprises an extensible integrated development environment having a language development tool plug-in (Gallardo described this on page 1 "*Because everything in Eclipse is a plug-in, plug-ins are available or planned that include support for programming languages like C/C++ and COBOL*").
- Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify teaching of Jorapur with the teachings of Gallardo to include the file creator comprises an extensible integrated development environment having a language development tool plug-in in order to use Eclipse as a Java IDE includes the Plug-in development environment (PDE) and provide a consistent, unified integrated development environment for users (Gallardo, on page 1).

15. Per claim 11 (Original)

the rejection of claim 9 is incorporated and Jorapur do not disclose

- the file creator comprises a program editor selected from a group of program editors comprising a Graphical User Interface program editor and a command line program editor.

But Gallardo discloses

- the file creator comprises a program editor selected from a group of program editors comprising a Graphical User Interface program editor and a command line program editor (Gallardo described this on page 3 “*The panel to the right of the Navigator is the editor area. Depending on the type of document selected in the Navigator, an appropriate editor window opens here.*” & Fig.1).
- The feature of providing the file creator comprises a program editor selected from a group of program editors comprising a Graphical User Interface program editor and a command line program editor would be obvious for the reasons set forth in the rejection of claim 10.

16. Claims 3-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorapur, in view of Partamian et al. (US Patent No. 7,062,755 B2, hereinafter “Partamian”).

17. Per claim 3 (Original)

the rejection of claim 1 is incorporated but Jorapur does not disclose

- the compiling comprises: initiating compilation of the temporary source file; attempting to resolve a compilation error; and outputting the compilation error.

However Partamian discloses

- the compiling comprises: initiating compilation of the temporary source file (col.5 lines 56-57 & Fig. 3 step 308); attempting to resolve a compilation error (col.1 lines 64-66) and outputting the compilation error (col.4 lines 61-63).
- Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify teaching of Jorapur with the teachings of Partamian to include initiating compilation of the temporary source file, attempting to resolve a compilation error, and outputting the compilation error in order to provide a solution to prevent a fatal error in the compiler caused the virtual machine to crash (Partamian, col.1 lines 30-35).

18. Per claim 4 (Original)

the rejection of claim 3 is incorporated and Partamian discloses

- comprising assigning data to a variable to resolve the compilation error (col.6 lines 14-20; *if the failed phase is essential for compilation and/or contributes significantly towards the performance of the compiled code, then the compiler attempts to replace that failed phase with a simpler version*).

19. Per claim 5 (Original)

the rejection of claim 1 is incorporated but Jorapur does not disclose

- compiling comprises: initiating compilation of the temporary source file; and resolving a compilation error encountered during compilation.

However Partamian discloses

- compiling comprises: initiating compilation of the temporary source file (col.5 lines 56-57 & Fig. 3 step 308) and resolving a compilation error encountered during compilation (col.1 lines 60-66 “*If compilation of a particular region results in a fatal error...*”).
- The feature of providing compiling comprises: initiating compilation of the temporary source file; and resolving a compilation error encountered during compilation would be obvious for the reasons set forth in the rejection of claim 3.

20. Per claim 14 (Original)

Partamian discloses

- the adaptive compiler is able to initiate compilation of the temporary source file (col.5 lines 56-57 & Fig. 3 step 308), output a compilation error (col.4 lines 61-63), and alter contents of the temporary source file to resolve the compilation error (col.6 lines 14-20).

21. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorapur, in view of Gertz et al. (US Pub. No. 20040003335 A1, hereinafter “Gertz”).

22. Per claims 18 (Currently amended)

the rejection of claim 15 is incorporated but Jorapur does not discloses

- compiling comprises inserting a line of code into the temporary source file to resolve a compilation error.

However Gertz discloses

- compiling comprises inserting a line of code into the temporary source file to resolve a compilation error ([0036] *“The user can select a suggested correction, and then the system corrects the error in the current line of code (i.e., locally) or at other locations in the code, and also corrects other problems, errors, or issues throughout the code that are related to the initial error.”*).
- Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify teaching of Jorapur with the teachings of Gertz to include compiling comprises inserting a line of code into the temporary source file to resolve a compilation error in order to provide systems and methods for a user to quickly repair an error in his code, without requiring the user to be highly knowledgeable about underling error concepts (Gertz, [0008]).

23. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorapur, in view of Melamed et al. (US Pub. No. 20040107415 A1, hereinafter “Melamed”).

24. Per claim 12 (Original)

the rejection of claim 9 is incorporated but Jorapur does not discloses

- the file creator is able to create the temporary source file based upon the code segment, wherein the code segment is selected from a group of code segments comprising a code segment to parse strings, a code segment to perform binary shifting, a code segment to format files, a code segment of an Application Programming Interface, and a code segment of a library.

However Melamed discloses

- the file creator is able to create the temporary source file based upon the code segment, wherein the code segment is selected from a group of code segments comprising a code segment to parse strings, a code segment to perform binary shifting, a code segment to format files ([0051] “*scripts and/or computer program code for parsing any and all strings in the encoded files into test scripts recognized by the automation tool...*”), a code segment of a library ([0089] “*...a variety of built-in library functions ...*”), and a code segment of an Application Programming Interface ([0080] “*...associated APIs at expat/xmlparse/xmlparse.h ...*”)
- Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify teaching of Jorapur with the teachings of Melamed to include the file creator is able to create the temporary source file based upon the code segment, wherein the code segment is selected from a group of code segments comprising a code segment to parse strings, a code segment to perform binary shifting, a code segment to format files, a code segment of an Application Programming Interface, and a code segment of a library in order to provide automation tool generated test scripts and run them against the software application being tested (Melamed [0051]).

25. Claims 15 and 16 are machine-accessible medium claim corresponding to method claims 1 and 2 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1-11 respectively, above, as noted above.

***Response to Arguments***

Applicant's arguments filed on Oct. 18, 2007 have been fully considered but they are not persuasive.

In the remarks, Applicant argues that:

- (a) In regard to independent claims 1, 9, and 15 applicant respectfully submits currently amended claims that cited prior art does not disclose or suggest.
- (b) In regard to dependent claims 3-5, 8, 10-12, 14, and 16-18, applicant respectfully submits currently that cited prior art combination does not disclose or suggest.

**Examiner's response:**

Examiner disagrees.

- (a) With respect to claims 1, 9, and 15, examiner cited the different paragraphs of prior art of Jorapur for the currently amended claims. Please see details of this office action.
- (b) Since currently amended independent claims have been cited prior art in different paragraphs, claim rejections under 35 USC 103(a) will be maintained.

***Conclusion***

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after



the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junchun Wu whose telephone number is 571-270-1250. The examiner can normally be reached on 8:00-17:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW



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